



Engineering/Technology Educators of Indiana

78th Annual Conference “The Heart of STEM Education”

Date: October 31, 2009 – November 2, 2009

Location: Indianapolis Embassy Suites North
3912 Vincennes Road
Indianapolis, Indiana 46268

The 78th annual conference of ETEI is titled “The Heart of STEM Education”. Features of this conference include professional development sessions, hands-on sessions, networking opportunities, vendors, and much more!

Schedule for Saturday October 31, 2009

- 9:00-4:00 Session 1: Lego Robotics—Preconference Workshop (for pre-service, elementary and/or middle school teachers) In this hands-on workshop participating STEM teachers will gain experience how to use Lego NXT robots in the classroom and as a part of student competitive events. This workshop is limited to 16 participants from 8 schools. Applications to participate are due by October 20, 2009.
- 9:00-4:00 Session 2: CAD Academy—Preconference Workshop (for pre-service, middle and/or high school teachers). A comprehensive pre-engineering, pre-architecture and interdisciplinary program developed for the K12 and community college market. Track One: 3 HR - Mechanical featuring SolidWorks participants will experience the form, fit and function of 3D mechanical design before it is built (STEM centric) Track Two: 3 HR - Architecture featuring ArchiCAD participants will learn how the power of BIM will unlock student potential and vault your design program to new heights. Applications to participate are due by October 20, 2009

Schedule for Sunday November 1, 2009

- 11:00-3:00 **E/TEI Conference Registration Opens**
- 12:00-12:45 **E/TEI General Session – “The Heart of STEM”.** Welcome by E/TEI President, Gary Gray, and featured speaker, Indiana Superintendent of Public Instruction, *Dr. Tony Bennett*.
- 12:55-1:20 **Curriculum Committee Updates.** Presenter: *Dr. Richard Seymour*
- 1:30-2:00 **Conference Planning and Updates.** Presenter: *Mr. Doug Dillion*
- 2:15-3:13 Session 1: **Curriculum Committee Meeting.** Moderator: *Dr. Richard Seymour*
- Session 2: **Different Curriculum Approaches to Teaching Advanced Manufacturing.** A discussion on different curriculum approaches being used as the secondary level to teach advanced manufacturing. Information on AME 21, MSSC, and Independent programs will be discussed.
- Session 3: **New Tech High Schools: Multiple Approaches for Successful Results.** Learn more about new tech high schools, how they work, advantages, disadvantages, and how to get involved.
- Session 4: **Project Lead the Way Gateway to Technology Help Session.** Looking for troubleshooting techniques or how-to answers to help you in your Gateway Classroom? This hands-on session will focus on answering your questions to better help you teach your students. **ALL PARTICIPANTS MUST BRING THEIR PLTW LAPTOP TO PARTICIPATE. 2 Hour Session**—Presenter: *Dr. George Rogers*

Session 5: **Project Lead the Digital Electronics Help Session.** Looking for troubleshooting techniques or how-to answers to help you in your Digital Electronics Classroom? This hands-on session will focus on answering your questions to better help you teach your students. **ALL PARTICIPANTS MUST BRING THEIR PLTW LAPTOP TO PARTICIPATE. 2 Hour Session**—Presenter: *Mr. Larry Grigs*

3:30-4:30

Session 1: **How You can Help Shape the Future of E-TEI: How Teachers Can become Active in the Professional Association**—*Mr. Gary Gray*

Session 2: **Alternative Energy.** ECI Wind and Solar is an East Central Indiana based renewable energy service company. Their goal is to provide consumers with superb education with unparalleled service and sales of renewable energy products. ECI Wind and Solar started around the turn of the century when the founders needed to power their remote home sites. At the time, there was very little information available for someone who wished to learn about this exciting technology on their own. After a few years of study the company felt confident enough to purchase and install a small off the grid system in a remote cabin. For the first time in history there was power at the ECI Wind and Solar Home.
Presenter: *Mr. Eric Cotton*

Session 3: **Fluid Power for the Classroom.** An interactive curriculum that utilizes both hands on experience and web based lessons for the middle and high school classrooms. The Portable Fluid Power Demonstrator (PFPD) allows students to work with pneumatic and hydraulic systems in addition to introducing them electronic controls. The web based materials provide teachers instruction manuals and videos, student lessons, and extra resources related to fluid power. The scope of this project was to design and build a fluid power demonstration kit and accompanying curriculum to attract middle and high school students to science and engineering majors. It fits many school programs due to its low cost, portability and low resource requirements. Moreover, it can be used to teach simple concepts like velocity-flow and pressure-force relationships or can be extended to more involved concepts such as microcontroller and robotics. —Presenter: *Mr. Brian Bettag*

Session 4: **Project Lead the Way Gateway to Technology Help Session**—Continued

Session 5: **Project Lead the Digital Electronics Help Session**—Continued

4:45-5:45

Technology and Engineering Education Teacher Educator Meeting—*Hosted by Indiana State University*

6:00-10:00

Food, Fun, and Fellowship—*Join E/TEI for a group evening of events that include, food, fun, and fellowship. Gather in the hotel lobby for pizza and a movie or pizza and social hour. Pizza will be provided by E/TEI.*

Schedule for Monday November 2, 2009

7:30-Noon

Conference Registration Open (hotel lobby)

8:00-9:00

Session 1—**Funding Your Technology and Engineering Education Program.** If there is one constant in technology it is change! We work in a field that is constantly changing; however, the change doesn't only happen in the classroom. This presentation will focus on changes that have occurred in Technology and Engineering Education and Career and Technical Education courses in Indiana and funding that can support them. Presenter: *Mr. Doug Dillion*

Session 2—**Getting High School and Middle School Students Involved in Co and Extra-Curricular STEM Activities.** Looking for a way to introduce various programs to your school and students? This session will focus on how-to implement many of the most popular co and extra-curricular activities today. Some activities include FIRST Robotics, Lego League, VEX robotics, IMSTEAs, and more! Presenter: *Mr. Steve Florence*

Session 3—**Going Green in the Middle School: Approaches for Creating a Green Curriculum at the Middle School Level.** This session will focus on how teachers can use ordinary classroom consumables and equipment to introduce “going green” to middle school students. Presenter: *Mr. C.J. Shields*

Session 4—**Project Lead the Introduction to Engineering Design Help Session.** Looking for troubleshooting techniques or how-to answers to help you in your Introduction to Engineering Design Classroom? This hands-on session will focus on answering your questions to better help you teach your students. **ALL PARTICIPANTS MUST BRING THEIR PLTW LAPTOP TO PARTICIPATE. 2 Hour Session**—Presenter: *Ms. Kelly McGregor*

9:00-3:00

Engineering/Technology **VENDORS OPEN** (Feel free to visit at any time)

9:15-10:15

Session 1—**Administrator and Guidance Guide to Technology and Engineering Education Programs.** This informative session will cover the basics of what encompasses technology and engineering education including funding, curriculum, job outlook, dual credit, and post-secondary opportunities for your students. Presenters: *Mr. Gary Wynn and Mr. Mike Fitzgerald*

Session 2—**Project Move It.** Looking for a way to incorporate STEM at the middle school level in a way that gets students excited, engaged, and eager to learn? Learn how to get involved with Project Move it! Project Move It is an experiential learning project that teaches middle students (and teachers) how to design, fabricate, and competitively test fuel efficient go carts while applying science, technology, engineering, and mathematics principles and standards. Engineering materials and consumables are provided and teacher stipends may be available. This exciting summer program can serve as a standalone program or one that naturally complements other high school competitions. *Dr. Les Lunsford*

Session 3—**Teacher, What’s your Style?** The individual classroom teacher is the most important factor affecting student learning. Participants will gain an understanding of the importance of how students learn through this hands-on session on, how teacher’s teaching style impacts various student learning styles, meta-cognition, and reflective practice. As a result, educators can adequately adapt their teaching practices to reach every student thus creating student success. Presenter: *Dr. Steve McCaskey*

Session 4—**Project Lead the Introduction to Engineering Design Help Session—Continued**

10:30-11:30

Session 1—**Certifying Your Project Lead the Way Program.** High School Project Lead the Way programs must be certified by the second year in the program and re-certified every five years after. This process requires schools to demonstrate that they meet PLTW’s quality standards in professional development of teachers and counselors; the implementation of curriculum using required equipment and software; the formation of a Partnership Team, and several other criteria. This session will help to guide you through the “how to’s” of the certification process. Presenters *Ms. Rene Bailey and Mr. Don Kunkle*

- Session 2—**TECA Student Session: Student Teaching and Living to Tell About It!** Ever wonder what awaits you during your student teaching semester? In this session student teachers from Indiana State University, Purdue University, and Ball State University will share some of the tips, tricks, and pitfalls that will help you to have a successful student teaching experience. Moderator: *Dr. Kara Harris*
- Session 3—**How Can Being a TREKie and Getting FIT Benefit Your Students? Getting Your Students Involved in Tech TREK and Females in Technology.** Looking for university outreach programs that will complement and supplement your curriculum through hands-on and problem-solving activities? This session will give information on how you and your students can get involved in two very different programs at Indiana State University that focus on technology/engineering education and getting females involved in technology/engineering programs. Presenter: *Ms. Bev Bitzegaio*
- Session 4—**Integrating Math into the STEM Classroom. Looking for ways to integrate math into your classroom in such a way students “get it”?** This session will focus on different approaches for math integration into the STEM classroom to boost student success. Presented By: *Vigo County School Corporation*
- 11:45-12:15 **Department of Education Engineering-Technology Education Update**—Presenter: *Mr. Mike Fitzgerald*
- 12:30-1:45 **Lunch and E/TEI Awards—Join us for lunch and awards session in the conference hotel.** Featured guest speaker, Dr. Kraig Olejniczak, Dean of the College of Engineering, Valparaiso University. *Lunch is included in the price of registration.*
- 2:00-3:00 Session 1—**Aero Lab Hands-On Session.** Aero Lab is a hands-on, inquiry-based program in conceptual physics, math and technology for middle school through 9th grade students. Students build simple flying machines to teach forces, motion, practice math skills and technology. This is multi-disciplinary labs program meets many standards. Presenter: *Mr. Jack Frost*
- Session 2—**Creating an Updated Standards-Based Communications Classroom.** OMG, T911 (Oh my gosh, teacher alert change the subject). Do you sometimes wonder how to keep up with the students when it comes to new communications-based technologies? The world of communications has changed drastically over the past few years. This presentation will focus on ways of using different types of communications to catch the interest of your students while teaching them about technology in a standards-based approach. **IT IS RECOMMENDED (BUT NOT REQUIRED) PARTICIPANTS BRING LAPTOPS** Presenter: *Dr. Kara Harris*
- Session 3—**Creating Competitive Events for Your Classroom.** This session will focus on the use of contests, group challenges, and formal competitive events as a means of introducing technological and engineering concepts. Details related to organizing and conducting fair, informative, and worthwhile events will be covered. Presenter: *Dr. Richard Seymour*
- Session 4—**Experiences with Lily Endowment Teacher Creativity Fellowships.** This session will give a first-hand perspective from a technology/engineering education teacher on how to apply, get involved, and what to expect when working with Lily Endowment Teacher Creativity Fellowships. Presenter: *Mr. Doug Hunt*
- 3:15-5:00 **E/TEI Business Meeting—Conclusion of the 78th Annual E/TEI conference.** Elections of E/TEI officers and E/TEI business will be discussed and voted upon. Please plan to attend. Your vote and professional input is always needed as we collaboratively work to advance excellence and support for your students, community, profession, and YOU!



Engineering/Technology Educators is an Affiliate of the International Technology Education Association (ITEA).
Membership in ITEA is encouraged.

This is a preliminary conference schedule—sessions are subject to change.

Pre-Conference Workshop Registration

Saturday October 31st, 2009

9:00-4:00 **Session 1:** Lego Robotics—Pre-conference Workshop (for pre-service, elementary and/or middle school teachers) In this hands-on workshop participating STEM teachers will gain experience how to use Lego NXT robots in the classroom and as a part of student competitive events. This workshop is limited to 16 participants from 8 schools. Applications to participate are due by October 20, 2009. Cost: \$50.00 per school.

School Name _____

Participants _____

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9:00-4:00 **Session 2:** The CAD Academy—Pre-conference Workshop (for pre-service, middle and/or high school teachers). A comprehensive pre-engineering, pre-architecture and interdisciplinary K-12 program culminating with student certification.

Track One: 3 HR - Mechanical featuring SolidWorks participants will experience the form, fit and function of 3D mechanical design before it is built (STEM centric)

Track Two: 3 HR - Architecture featuring ArchiCAD participants will learn how the power of BIM will unlock student potential and vault your design program to new heights.

Applications to participate are due by October 20, 2009. Cost: \$25.00 per participant.

This session will take place at Zionsville High School. See info at hotel for directions.

Participants Name _____

School _____

*****Please return this registration page with conference registration**

**Engineering/Technology
Educators of Indiana
Conference Registration Form**

November 1-2, 2009

Name (First / Last)_____ Date_____

School (if applicable)_____ Address_____

City_____ State_____ Zip Code_____

Home Phone(_____) ____ - _____

E-mail Address (for confirmation) _____

School Phone(_____) ____ - _____

E/TEI Dues paid for the current year? YES NO (Your E/TEI District # _____)

REGISTRATION BEFORE 10/23/2009

- Member Registration \$60.00 _____
- Non-Member Registration \$80.00 _____
- Student Member Registration \$20.00 _____
- Retired Member Registration \$30.00 _____

AT THE CONFERENCE

- \$65.00 _____
- \$85.00 _____
- \$25.00 _____
- \$30.00 _____

DONATIONS

Golden Club (\$50)

Silver Club (\$25)

John Gray Memorial Fund: \$ _____ Gregg Steele Scholarship Fund \$ _____

Total Amount \$ _____

*Notes: ALL registration prices include lunch on Monday.

ITEA membership is not required for attendance at the E/TEI conference.

Please pay for E/TEI conference registration by check, cash or purchase order.

E/TEI cannot process credit/debit card transactions

MAKE PAYMENTS PAYABLE TO E/TEI

Highly Recommended "ITEA" membership opportunity!



ASK Your E/TEI representative for an ITEA membership form today!
The Engineering/Technology Educators of Indiana is a proud affiliate
of ITEA and strongly encourages unified membership in ITEA

RETURN FORM TO:

Becky Taylor, Conference Registration
3459 E. 300 N.
Greenfield, IN 46140

RECEIVED

Date:

Check # / P.O.#:

Engineering / Technology Educators of Indiana

Date: November 1-2 2009

Theme: "The Heart of STEM Education" 78th Annual E/TEI Conference

Location: Indianapolis Embassy Suites North
3912 Vincennes Road
Indianapolis, Indiana 46268



Reservation Information

To make room reservations for the conference you may contact the hotel at 317-872-7700. Please be sure to make your reservation in the block of rooms designated for the Technology Educators of Indiana to receive the best rate. Current rates have been quoted to be \$109 per night. Rates are subject to change. Please reserve your room soon. Cut-off date has been established as Oct. 1st, 2009

- Phone: 317-872-7700
- Web: <http://www.indianapolisnorth.embassysuites.com>

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The Engineering/Technology Educators of Indiana is an affiliate of ITEA.
Plan now to also attend the International Technology Education Association Conference
in Charlotte, North Carolina on
March 18-20, 2010
Green Technology: STEM
Solutions for 21st Century



For more information: <http://www.iteaconnect.org>

E/TEI is an affiliate of ITEA. To renew your membership in ITEA
please complete the form below and mail to:

ITEA Membership
1914 Association Dr.
Suite 201
Reston, VA 20191



MEMBERSHIP APPLICATION

JOIN ITEA

AND RECEIVE THESE
MEMBER BENEFITS:
The Technology Teacher
(all memberships)
Technology and Children
(group memberships)
Grants & Scholarships
Professional Development
Publications Discounts
Recognition & Awards
Government Relations
Insurance Programs
Networking Opportunities
Online Resources

Our members are classroom teachers from elementary to high school, local and state/provincial supervisors, college/university faculty, and museum staff. Their common ground is an interest and involvement in technology education. Founded in 1939, ITEA brings together technology education professionals to share ideas, gain professional development, and improve public understanding of technological literacy.

☐ New ☐ Renew Member ID# _____

Check preferred mailing address: ☐ Home ☐ School/Business

Name _____
Home Address _____
City _____ State/Province _____ Zip + 4/Postal Code _____
Phone _____ Fax _____ Email _____

School or Business _____
Address _____
City _____ State/Province _____ Zip + 4/Postal Code _____
Phone _____ Fax _____ Email _____

Individual Membership

Professional (U.S.A.)	<input type="checkbox"/> 2 Year \$155	<input type="checkbox"/> 1 Year \$80
Canada & Mexico	<input type="checkbox"/> 2 Year \$165	<input type="checkbox"/> 1 Year \$85
Other Foreign	<input type="checkbox"/> 2 Year \$175	<input type="checkbox"/> 1 Year \$90
Undergraduate Student – first-time member	<input type="checkbox"/> 1 Year \$35	
Full-time Grad./Renewing Undergraduate Student	<input type="checkbox"/> 1 Year \$40	
Bridge – one-time Student to Professional	<input type="checkbox"/> 1 Year \$65	
Advocate (includes TIDE, Retired, and Sustaining Technical Rep.)	<input type="checkbox"/> 1 Year \$40	

Group Membership

Elementary School	<input type="checkbox"/> 2 Year \$310	<input type="checkbox"/> 1 Year \$160
Institutional (University)	<input type="checkbox"/> 2 Year \$470	<input type="checkbox"/> 1 Year \$240
Museum	<input type="checkbox"/> 2 Year \$470	<input type="checkbox"/> 1 Year \$240
Corporate	<input type="checkbox"/> 2 Year \$790	<input type="checkbox"/> 1 Year \$400

Payment

Must be in U.S. Currency and drawn on a U.S. bank.

☐ P.O. # _____ (Attach Original)
☐ Check enclosed (made payable to ITEA)
☐ Please charge \$ _____ to:
☐ VISA ☐ MasterCard ☐ Discover

Card Number _____
Exp. Date _____ Signature _____

Optional Councils (ITEA Membership Required)

Two-year ITEA dues? Don't forget to double your council dues, too!

☐ CTTE – Teacher Educator \$40
☐ CS – Supervisors \$20
☐ TECC – Elementary \$25 (Includes *Technology and Children*)

Optional Subscriptions

☐ *The Technology Teacher* (electronic version - pdf) \$65/year
☐ *Technology and Children* (4x a year)
U.S.: \$45, Members \$35 Foreign: \$55, Members \$45
☐ *Technology and Children* (electronic version - pdf) \$30/year
☐ *Journal of Technology Education* \$15/year; \$20 outside U.S.

General Position

☐ Elementary Teacher
☐ Middle/Junior High Teacher
☐ High School Teacher
☐ Supervisor/Administrator
☐ Junior/Community College Professor
☐ University Professor
☐ Undergraduate College Student
☐ Graduate Student
☐ Retired
☐ Non Teaching/Consulting/Sales
☐ TIDE (Technology/Design/Engineering)

☐ Male
☐ Female

Age Range

☐ 18-25
☐ 26-35
☐ 36-45
☐ 46-55
☐ Over 55

Phone: 703-860-5032
Fax: 703-860-0353
Email: members@iteaconnect.org
Mail: 1914 Association Drive
Suite 201
Reston, VA 20191-1539

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Join online at:
www.iteaconnect.org/Membership/membership.htm

